

In the Claims

For the convenience of the Examiner, all pending claims of the present Application are presented below whether or not an amendment has been made. appended claims.

1. **(Currently Amended)** A method for establishing a communications connection, comprising:

providing a digital subscriber line access multiplexer having an integrated circuit chip, the integrated circuit chip operable to form a digital subscriber line connection with a communications device;

consecutively transmitting a plurality of parameters by the digital subscriber line access multiplexer to the communications device, each parameter correlated with at least one connection setting and identifying a particular party as a manufacturer of the integrated circuit chip, **wherein consecutively transmitting a plurality of parameters comprises consecutively transmitting a plurality of parameters using a corresponding plurality of C-MSGs1 messages;**

establishing a plurality of digital subscriber line connections each having a one-to-one correspondence with one of the plurality of parameters, wherein each connection is established in response to transmitting the connection's corresponding parameter using the at least one connection setting correlated with the corresponding parameter;

selecting one of the connections having a data transfer rate that is greater than a particular threshold;

identifying the parameter that corresponds to the selected connection; and

initiating, by the digital subscriber line access multiplexer, an establishment of the digital subscriber line connection with the communications device using ~~a-the-at-least~~ **one the at least one** connection setting correlated with the identified parameter.

2. **(Currently Amended)** The method of Claim 1, wherein the communications device is a first communications device belonging to a category, and the method further comprising:

correlating the identified parameter with the category;

terminating the digital subscriber line connection with the first communications device;

receiving a request to form a new digital subscriber line connection with a second communications device, the second communications device belonging to the category;

determining that the second communications device belongs to the category;

and

in response to the determination that the second communications device belongs to the category, establishing the new digital subscriber line connection with the second communications device using ~~the communications~~ the at least one connection setting correlated with the identified parameter.

3. **(Previously Presented)** The method of Claim 1, wherein selecting one of the connections comprises selecting one of the connections having a signal to noise ratio that is within predetermined range.

4. **(Canceled)**

5. (Currently Amended) ~~The method of Claim 1, wherein~~ A method for establishing a communications connection, comprising:

~~the plurality of parameters is a plurality of parameter sets,~~

~~the consecutively transmitting involves consecutively transmitting a plurality of parameters sets,~~

~~the plurality of digital subscriber line connections each having a one-to-one correspondence with one of the parameter sets,~~

~~each connection is established in response to transmitting the connection's corresponding parameter set using the at least one connection setting correlated with the corresponding parameter set;~~

~~the identifying includes identifying the parameter set that corresponds to the selected connection;~~

~~the initiating includes initiating, by the digital subscriber line access multiplexer, an establishment of the digital subscriber line connection with the communications device using a the at least one connection setting correlated with the identified parameter set~~

providing a digital subscriber line access multiplexer having an integrated circuit chip, the integrated circuit chip operable to form a digital subscriber line connection with a communications device;

consecutively transmitting a plurality of parameter sets by the digital subscriber line access multiplexer to the communications device, each parameter set correlated with at least one connection setting and identifying a particular party as a manufacturer of the integrated circuit chip, wherein consecutively transmitting a plurality of parameter sets comprises consecutively transmitting a plurality of parameter sets using a corresponding plurality of C-MSGs1 messages;

establishing a plurality of digital subscriber line connections each having a one-to-one correspondence with one of the plurality of parameter sets, wherein each connection is established in response to transmitting the connection's corresponding parameter set using the at least one connection setting correlated with the corresponding parameter set;

selecting one of the connections having a data transfer rate that is greater than a particular threshold;

identifying the parameter set that corresponds to the selected connection;
initiating, by the digital subscriber line access multiplexer, an establishment of
the digital subscriber line connection with the communications device using the at least
one connection setting correlated with the identified parameter set; and

and each parameter set identifies the particular party as a manufacturer of the integrated circuit chip and a particular version of ANSI T1.413 standard to which the integrated circuit ~~ship~~ **chip** complies.

6. **(Currently Amended)** A method for establishing a communications connection, comprising:

transmitting, by a digital subscriber line access multiplexer to a communications device, a plurality of parameters each representing a different indication of a same feature of the digital subscriber line access multiplexer and correlated with one or more communications settings, wherein each parameter is transmitted as a part of a particular C-MSGs1 message;

establishing a plurality of digital subscriber line connections with the communications device, each connection corresponding with a particular one of the parameters;

selecting one of the connections as meeting a predetermined criteria;

identifying the parameter that corresponds to the selected connection; and

establishing a digital subscriber line connection with the communications device using at least one communications setting correlated with the identified parameter.

7. **(Original)** The method of Claim 6, wherein the same feature is a manufacturer of an integrated circuit chip in the digital subscriber line access multiplexer, the integrated circuit chip operable to establish the plurality of digital subscriber line connections.

8. **(Original)** The method of Claim 6, wherein the same feature is a model identifier of an integrated circuit chip in the digital subscriber line access multiplexer, the integrated circuit chip operable to establish the plurality of digital subscriber line connections.

9. **(Original)** The method of Claim 6, wherein the same feature is a particular version of ANSI T1.413 to which an integrated circuit chip in the digital subscriber line access multiplexer complies, the integrated circuit chip operable to establish the plurality of digital subscriber line connections.

10. **(Canceled)**

11. **(Previously Presented)** The method of Claim 6, wherein selecting one of the connections comprises selecting the connection having the fastest data transfer rate while having a signal to noise ratio no less than six decibels.

12. **(Original)** The method of Claim 6, wherein selecting one of the connections comprises selecting one of the connections having a signal to noise ratio that is within a predetermined range.

13. **(Original)** The method of Claim 6, wherein selecting one of the connections comprises selecting one of the connections having a data transfer rate that is equal to or greater than a minimum data transfer rate and a signal to noise ratio that is within zero to nine decibels.

14. **(Original)** The method of Claim 6, and further comprising:
receiving an indication that a previously established digital subscriber line connection between the communications device and the digital subscriber line access multiplexer is unsatisfactory; and
wherein the plurality of parameters are transmitted in response to receiving the indication.

15. **(Currently Amended)** The method of Claim 6, wherein transmitting a plurality of parameters comprises consecutively transmitting the plurality of parameters, each parameter transmitted after ~~establishing~~ failing to establish a corresponding one of the connections.

16. **(Previously Presented)** The method of Claim 6, wherein the communications device is a first communications device belonging to a category, and the method further comprising:

correlating the identified parameter with the category;

terminating the established digital subscriber line connection with the first communications device;

receiving a request to form a new digital subscriber line connection with a second communications device, the second communications device belonging to the category;

determining that the second communications device belongs to the category;

and

in response to the determination that the second communications device belongs to the category, establishing the new digital subscriber line connection with the second communications device using the at least one communications setting correlated with the identified parameter.

17. **(Currently Amended)** The method of Claim 6, ~~wherein the establishments of digital subscriber line connections are attempted establishments, and the method~~ further comprising:

failing to establish any digital subscriber line connection with the communications device using the plurality of parameters; and

establishing a safety digital subscriber line connection using a set of safety parameters, the set including a first parameter indicating that bit-swapping is disabled, a second parameter indicating that trellis coding is disabled, a third parameter indicating that no power management is conducted, and a fourth parameter indicating that overhead framing mode three is supported.

18. **(Currently Amended)** A system for establishing a communications connection, comprising:

a digital subscriber line access multiplexer having a processor and an integrated circuit chip operable to establish a digital subscriber line connection with a communication device; and

a program operable, when executed using the processor, to:

transmit a plurality of parameters to the communications device, each parameter representing a different indication of a same feature of the digital subscriber line access multiplexer and correlated with one or more communications settings, **wherein each parameter is transmitted as a part of a particular C-MSGs1 message transmitted by the integrated circuit chip;**

establish a plurality of digital subscriber line connections with the communications device through the integrated circuit chip, each connection corresponding with a particular one of the parameters;

select one of the connections as meeting a predetermined criteria;

identify the parameter that corresponds to the selected connection; and

establish the digital subscriber line connection with the communications device using at least one communications setting correlated with the identified parameter.

19. **(Original)** The system of Claim 18, wherein the same feature is a manufacturer of the integrated circuit chip.

20. **(Original)** The system of Claim 18, wherein the same feature is a model identifier of the integrated circuit chip.

21. **(Original)** The system of Claim 18, wherein the same feature is a particular version of ANSI T1.413 to which the integrated circuit chip complies.

22. **(Canceled)**

23. **(Previously Presented)** The system of Claim 18, wherein the program is operable to select the connection having the fastest data transfer rate as meeting the predetermined criteria.

24. **(Previously Presented)** The system of Claim 18, wherein the program is operable to select the connection having the highest signal to noise ratio as being within a predetermined range.

25. **(Original)** The system of Claim 18, wherein the program is operable to select one of the connections having a data transfer rate that is equal to or greater than a minimum data transfer rate and a signal to noise ratio that is within a predetermined range of one decibel to nine decibels.

26. **(Original)** The system of Claim 18, wherein the program is further operable to:

receive an indication that a previously established digital subscriber line connection between the communications device and the digital subscriber line access multiplexer is unsatisfactory; and

wherein the plurality of parameters are transmitted in response to receiving the indication.

27. **(Currently Amended)** The system of Claim 18, wherein the program is operable to transmit a plurality of parameters by consecutively transmitting the plurality of parameters, each parameter transmitted after **establishing failing to establish** a corresponding one of the connections.

28. **(Original)** The system of Claim 18, wherein the communications device is a first communications device belonging to a category, and the program is further operable to:

initiate a correlation of the identified parameter with the category;

terminate the established digital subscriber line connection with the first communications device;

receive a request to form a new digital subscriber line connection with a second communications device, the second communications device belonging to the category;

determine that the second communications device belongs to the category; and

in response to the determination that the second communications device belongs to the category, initiate an establishment of the new digital subscriber line connection with the second communications device using the at least one communications setting correlated with the identified parameter.

29. **(Previously Presented)** The system of Claim 18, wherein the program is further operable to:

determine that the integrated circuit chip failed to establish any digital subscriber line connection with the communications device;

initiate an establishment of a safety digital subscriber line connection using a set of safety parameters, the set including only a first parameter indicating that bit-swapping is disabled, a second parameter indicating that trellis coding is disabled, a third parameter indicating that no power management is conducted, and a fourth parameter indicating that overhead framing mode three is supported.

30. **(Original)** The system of Claim 18, wherein the program is implemented as a part of the integrated circuit chip.

31. **(Currently Amended)** A system for establishing a communications connection, comprising:

means for communicating with a communications device over a digital subscriber line connection; and

means for transmitting a plurality of parameters to the communications device, each parameter representing a different indication of a same feature of the digital subscriber line access multiplexer and correlated with one or more communications settings, **wherein each parameter is transmitted as a part of a particular C-MSGs1 message,** establishing a plurality of digital subscriber line connections with the communications device through the integrated circuit chip, each connection corresponding with a particular one of the parameters, selecting one of the connections as meeting a predetermined criteria, identifying the parameter that corresponds to the selected connection, and establishing the digital subscriber line connection with the communications device using at least one communications setting correlated with the identified parameter.

32. **(New)** A method for establishing a communications connection, comprising:

transmitting, by a digital subscriber line access multiplexer to a communications device, a plurality of parameters each representing a different indication of a same feature of the digital subscriber line access multiplexer and correlated with one or more communications settings;

establishing a plurality of digital subscriber line connections with the communications device, each connection corresponding with a particular one of the parameters;

selecting one of the connections as meeting a predetermined criteria;

identifying the parameter that corresponds to the selected connection;

establishing a digital subscriber line connection with the communications device using at least one communications setting correlated with the identified parameter;

failing to establish any digital subscriber line connection with the communications device using the plurality of parameters; and

establishing a safety digital subscriber line connection using a set of safety parameters, the set including a first parameter indicating that bit-swapping is disabled, a second parameter indicating that trellis coding is disabled, a third parameter indicating that no power management is conducted, and a fourth parameter indicating that overhead framing mode three is supported.

33. (New) A system for establishing a communications connection, comprising:

a digital subscriber line access multiplexer having a processor and an integrated circuit chip operable to establish a digital subscriber line connection with a communication device; and

a program operable, when executed using the processor, to:

transmit a plurality of parameters to the communications device, each parameter representing a different indication of a same feature of the digital subscriber line access multiplexer and correlated with one or more communications settings;

establish a plurality of digital subscriber line connections with the communications device through the integrated circuit chip, each connection corresponding with a particular one of the parameters;

select one of the connections as meeting a predetermined criteria;

identify the parameter that corresponds to the selected connection;

establish the digital subscriber line connection with the communications device using at least one communications setting correlated with the identified parameter;

determine that the integrated circuit chip failed to establish any digital subscriber line connection with the communications device;

initiate an establishment of a safety digital subscriber line connection using a set of safety parameters, the set including only a first parameter indicating that bit-swapping is disabled, a second parameter indicating that trellis coding is disabled, a third parameter indicating that no power management is conducted, and a fourth parameter indicating that overhead framing mode three is supported.